

CLAIMS

What is claimed is:

1. The invention is a method for forming an image comprising the steps of:

5 a) thermally imaging a multi-layer imageable element and forming an imaged imageable element comprising imaged and complementary unimaged regions;

in which:

10 the imageable element comprises a substrate, an underlayer over the substrate, and a top layer over the underlayer;

the element comprises a photothermal conversion material;

the top layer is substantially free of the photothermal conversion material;

the top layer is ink receptive;

15 before thermal imaging, the top layer is not removable by an alkaline developer;

after thermal imaging, the imaged regions are removable by the developer; and

the underlayer is removable by the developer; and

20 b) developing the imaged imageable element with the developer and removing the imaged regions without substantially affecting the unimaged regions;

in which:

the developer is fresh developer; and

the developer is not reused.

25 2. The method of claim 1 in which the developer is a solvent based developer, and the developer has a pH below about 10.5.

3. The method of claim 1 in which the developer is a high pH

developer.

4. The method of claim 1 in which about 0.5 L to 4.0 L of developer is used per m² of imaged imageable element.

5 5. The method of claim 4 in which imaging is carried out using stochastic screening.

6. The method of claim 1 in which the top layer comprises a novolac resin and a dissolution inhibitor.

7. The method of claim 6 in which the underlayer comprises a copolymer of N-phenylmaleimide, methacrylamide, and methacrylic acid.

10 8. The method of claim 1 in which imaging is carried out using stochastic screening.

9. The method of claim 8 in which the top layer comprises a novolac resin and a dissolution inhibitor.

15 10. The method of claim 9 in which the underlayer comprises a copolymer of N-phenylmaleimide, methacrylamide, and methacrylic acid.

11. The method of claim 10 in which the developer is a solvent based developer, and the developer has a pH below about 10.5.

12. The method of claim 11 in which about 0.5 L to 4.0 L of developer is used per m² of imaged imageable element.

20 13. The method of claim 10 in which the developer is a high pH developer.

14. The method of claim 13 in which about 0.5 L to 4.0 L of developer is used per m² of imaged imageable element.